1 — General Information

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RM-1 product selection

Nokia RM-1 is a WCDMA/GSM dual mode handportable phone, supporting WCDMA 2000 (UMTS) and EGSM 900/1800/1900 bands.

According to GSM standard 05.05 it responds to class 4 (max. 2W) in EGSM 900, class 1 (1W) in DCS 1800 and class 1 in PCS 1900. RM-1 supports EGPRS (EDGE) class B as well as Bluetooth 1.1 standard. The handset has a full phase 2 Type Approval and it complies with the GSM Type Approval. RM-1 also has a full CE approval and FCC approval.

RM-1 is an MMS (Multimedia Messaging Service) enabled phone with a large bright colour display and an integrated 1.3 megapixel digital camera.

The MMS implementation follows the OMA MMS standard release 1.2.

WAP 2.0 compatible browser supports XHTML Mobile Profile (MP) and uses a TCP/IP stack to communicate with a gateway in network.

RM-1 uses Symbian 8.0a operating system and supports also MIDP Java 2.0 & CLDC1.1, providing a good platform for 3rd party applications.

RM-1 runs a 3G radio, Symbian operating system and Nokia Series 60 user interface.

Figure 1 View of RM-1

RM-1 transceiver features

Display and keypad features

- Active matrix colour display (176x208, 65k colors)
- Automatic brightness control for display (>200Cd/m2)
- Graphical user interface with selectable themes
- 5-way scroll, two softkeys, application-key, edit and clear key, send & end + key matrix
- Voice key for voice dialling and commands

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Hardware and software characteristics

- Monoblock, BB5.0
- 10 MB flash for user data + RS MMC card slot
- Quadband EGSM 900/1800+1900+WCDMA 2GHz, internal antenna
- Speech codecs: FR,EFR, AMR
- Integrated 1.3 megapixel camera
- Integrated Bluetooth & USB 2.0 full speed (12Mbps nominal)
- Integrated handsfree speaker, internal vibra
- SP-MIDI, XMF & true tones for ringtones and alerts
- Support for 3GPP video streaming and video capture (codec: h.263 baseline)
- GPRS, class B, multislot class 10, EGPRS cl. 6, WCDMA PS max speeds UL/DL 128/128 kbps, or 128/384kbps. WCDMA CS 64kpbs
- XHTML browser with true Internet capability
- SWIM and DRM combined & separate delivery
- Real time clock + 20h backup battery
- Pop-port™ connector

UI features

- Advanced camera modes: still, burst and video.
- Digital zoom up to 6X
- Image/video sending during phone call
- MMS text messages with images, sounds, video- or audio clips. (SMIL x.y)
- Multimedia player with streaming support (Real Player)
- New improved multimedia gallery
- Downloadable instrumental ringing tones (SP-MIDI, XMF), true tones (WB-AMR/MP3/AAC)
- Advanced S60 PIM (calendar, contacts, task list, etc.)
- Voice dialling and voice commands
- Off-line mode (phone use without SIM/network)
- Voice recording
- Muvee automatic video editing
- Manual video editing
- Start up wizard for easy configuration
- NVO hoover

Sales package

- RM-1 transceiver
- Charger ACP-12
- Battery BL-5C
- CD-ROM containing software and guides
- User guide
- Stereo headset HS-3
- RS -MMC 64MB memory card
- Adapter for MMC
- USB cable DKU-2

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Product and module list

Module name	Type code	Material code	Notes
System/RF Module	1AX	202190	Main PWB with components
UI Module	1AY	202191	Keyboard PWB with components. Part of the UI Frame Assy
Camera Module		4858047	Mirage-1.3X
Display Module		4850851	HALTI2
Chassis Assy		9467135	Mechanical Assembly
UI Frame Assy		9467138	Mechanical Assembly
SW Module		N/A	N/A

RM-1 mobile enhancements

Battery	Type	Product code
Battery 900mAh Li-ion	BL-5C	0273558

Chargers	Type	Product code
Fast travel charger (multi-voltage), Australia	ACP-12A	N/A
Fast travel charger (multi-voltage), Argentina	ACP-12AR	N/A
Fast travel charger (multi-voltage), China	ACP-12C	N/A
Fast travel charger (Euro plug), 100- 240 Vac	ACP-12E	0273386
Fast travel charger (US plug), 100-240 Vac	ACP-12US	N/A
Travel charger (multi-voltage), Brazil/Portugal	ACP-12UB	N/A
Fast travel charger, Japan	ACP-12J	N/A
Fast travel charger (gradiente CR1000), Brazil	ACP-12G	N/A
Fast travel charger (UK plug), multi-voltage	ACP-12X	0273387
Retractable travel charger (Europe)	AC-1E	0274390

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Chargers	Type	Product code
Retractable travel charger (UK)	AC-1X	0274387

Car accessories	Type	Product code
Mobile charger (EA, APAC, Americas)	LCH-12	0274039
Wireless car kit (sales pack)	CK-7W	0080948

Pop Port ™ accessories	Type	Product code
Boom mono headset	HDB-4	0273504
Fashion stereo headset	HDS-3	0273505
Mono headset	HS-5	0274086
Stereo headset	HS-3	0274576
Retractable headset	HS-10	0274162
USB data cable	DKU-2	0273643
Loopset	LPS-4	0273270
FM radio headset	HS-2R	0273951

Imaging accessories	Type	Product code
Nokia image viewer	SU-5	0274284
Nokia image album	PD-1	0080855
Camera flash	PD-2	N/A
Nokia video call stand	PT-8	0277825

Bluetooth accessories	Type	Product code
Bluetooth car kit (sales pack) (EURO 1)	CK-7W	0080948
Bluetooth image viewer	SU-5	0274284
Bluetooth QWERTY keypad (Scandinavian EURO 1)	SU-8W	0277890
Nokia digital pen (Eur/US)	SU-1B	0274231
Wireless headset	HDW-3	0274141
	HS-3W	0274424
	HS-4W	0274702
	HS-11W	N/A
FM radio headset	HS-2R	0274111
Inductive loopset	LPS-4	0273270

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Bluetooth accessories	Type	Product code
Wireless GPS module	LD-1W	N/A

Other accessories	Type	Product code
Xpress-on colour covers	Green CC-215D	N/A
	Red CC-215D	N/A
	Blue CC-215D	N/A
	Beige CC-215D	N/A
RS multimedia card 64 MB	MU-1	0278205
Carrying case	N/A	N/A
Neck strap	N/A	N/A

Technical specifications

RM-1 transceiver general specifications

Unit	Dimensions (L x W x T)	Weight (g)	Volume (cm3)
Transceiver with BL-5C 900mAh li-ion battery back	110 x 60 x 20.6	127	109cc

Main RF characteristics for triple-band (GSM900/1800/1900) and WCDMA phones

Parameter	Unit
Cellular system	EGSM900, GSM1800/1900 and WCDMA
Rx frequency band	EGSM900: 925 - 960 MHz
	GSM1800: 1805 - 1880 MHz
	GSM1900: 1930 - 1990 MHz
	WCDMA: 2110 - 2170 MHz
Tx frequency band	EGSM900: 880 - 915 MHz
	GSM1800: 1710 - 1785 MHz
	GSM1900: 1850 - 1910 MHz
	WCDMA: 1920 - 1980 MHz
Output power	GSM900: +5 ... +33dBm/3.2mW ... 2W
	GSM1800: +0 ... +30dBm/1.0mW ... 1W
	GSM1900: +0 ... +30dBm/1.0mW ... 1W
	WCDMA -50 ... 21 dBm

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Parameter	Unit
Number of RF channels	GSM900: 125
	GSM1800: 375
	GSM1900: 300
Channel spacing	200 kHz
Number of Tx power levels	GSM900: 15
	GSM1800: 16
	GSM1900: 16

Battery endurance

Battery	Capacity (mAh)	Talk time	Stand-by
BL-5C	900	up to 2.2-3.2 hrs (WCDMA) and 3-6 hrs (GSM)	up to 6 - 11 days

Charging times

ACP-12	LCH-12
1 h 15 min	1 h 15 min

Environmental conditions

Environmental condition	Ambient temperature	Notes
Normal operation	-15ºC...+55ºC	Specifications fulfilled
Reduced performance	-25ºC...-15ºC +55ºC...+70ºC	Operational for shorts periods only
Intermittent operation	-40ºC...-15ºC +70ºC...+85 ºC	Operation not guaranteed but an attempt to operate does not damage the phone.
No operation or storage	<-40ºC...>+85ºC	No storage or operation: an attempt may damage the phone.
Charging allowed	-25ºC...+50ºC	
Long term storage conditions	0ºC...+85ºC	

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